WHAT IS CLAIMED IS:

1.   An image processing apparatus for compressing and
storing image data, comprising:

5   division means for dividing the image data into a
pixel block, which is a group of a predetermined number
of pixels;

          generation means for compressing the data in the
pixel block unit and sequentially generating packet

10   data;

          packet table storage means for storing, as a
packet table, a storage address of packet data
corresponding to each pixel block subjected to division
by said division means; and

15   storage control means for storing packet data of
interest generated by said generation means and a
storage address of the packet data of interest in the
packet table when the packet data of interest is
different from preceding packet data, whereas when the

20   packet data of interest is equal to the preceding
packet data, not storing the packet data of interest,
but storing in the packet table a storage address of
the preceding packet data as a storage address of the
packet data of interest.

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2.   The image processing apparatus according to claim
1, wherein the preceding packet data is a packet

corresponding to a pixel block immediately preceding to the packet data of interest.

3. The image processing apparatus according to claim 1, wherein the packet data stored by said storage control means and the packet table are stored as one file.

4. The image processing apparatus according to claim 1, wherein the packet table includes a flag indicative of whether or not to refer to an address of another packet data as a storage destination of packet data corresponding to a pixel block of interest.

5. An image processing method of compressing and storing image data, comprising:

a division step of dividing the image data into a pixel block, which is a group of a predetermined number of pixels;

a generation step of compressing the data in the pixel block unit and sequentially generating packet data;

a packet table storage step of storing, as a packet table, a storage address of packet data corresponding to each pixel block subjected to division at said division step; and

a storage control step of storing packet data of

interest generated at said generation step and a storage address of the packet data of interest in the packet table when the packet data of interest is different from preceding packet data, whereas when the packet data of interest is equal to the preceding packet data, not storing the packet data of interest, but storing in the packet table a storage address of the preceding packet data as a storage address of the packet data of interest.

6.   A computer program functioning as an image processing apparatus which compresses and stores image data, comprising:

    program codes for a division step of dividing the image data into a pixel block, which is a group of a predetermined number of pixels;

    program codes for a generation step of compressing the data in the pixel block unit and sequentially generating packet data;

    program codes for a packet table storage step of storing, as a packet table, a storage address of packet data corresponding to each pixel block subjected to division at said division step; and

    program codes for a storage control step of storing packet data of interest generated at said generation step and a storage address of the packet data of interest in the packet table when the packet

data of interest is different from preceding packet
data, whereas when the packet data of interest is equal
to the preceding packet data, not storing the packet
data of interest, but storing in the packet table a

5   storage address of the preceding packet data as a
storage address of the packet data of interest.

7.   A storage medium storing program codes
functioning as an image processing apparatus which

10 compresses and stores image data, comprising:
        program codes for a division step of dividing the
image data into a pixel block, which is a group of a
predetermined number of pixels;
        program codes for a generation step of

15 compressing the data in the pixel block unit and
sequentially generating packet data;
        program codes for a packet table storage step of
storing, as a packet table, a storage address of packet
data corresponding to each pixel block subjected to

20 division at said division step; and
        program codes for a storage control step of
storing packet data of interest generated at said
generation step and a storage address of the packet
data of interest in the packet table when the packet

25 data of interest is different from preceding packet
data, whereas when the packet data of interest is equal
to the preceding packet data, not storing the packet

data of interest, but storing in the packet table a
storage address of the preceding packet data as a
storage address of the packet data of interest.

5 8.   An image processing apparatus at least having
compression means for compressing image data, packet
generation means for packing the compressed image data
in a form of a packet, a buffer for temporarily storing
the packet, and comparison means for comparing the
10 packet stored in the buffer with a packet generated by
said packet generation means,
       wherein when said comparison means finds that a
compressed packet of interest is equal to compressed
packet data stored in said buffer, a flag is set for
15 indicating that data of the compressed packet of
interest is equal to data in the buffer.

9.   The image processing apparatus according to claim
8, wherein when a match is found as a result of
20 comparing the packet generated by said packet
generation means with packet stored in said buffer,
data is extracted from a packet to be generated and a
packet including only a packet header is generated.

25 10.   The image processing apparatus according to claim
8, wherein in a case where a volume of the packet of
interest is larger than a predetermined volume, the

packet is not stored in said buffer and excluded from comparison.

11. A memory writing apparatus for receiving the packet described in claim 8, and not storing the packet in a memory when a flag indicative of equality to image data of a preceding pixel block in the packet is set, but storing the packet in the memory when the flag is not set.

12. A multi-function apparatus having a scanner controller for controlling a scanner unit which reads a document image, a printer controller for controlling a printer unit which prints an image on a print medium, and a system controller for controlling an entire system and having an image memory, all of which are connected through a bus, said scanner controller comprising:

division means for dividing image data, read by the scanner unit, into a pixel block, which is a group of a predetermined number of pixels;

generation means for compressing the data in the pixel block unit and sequentially generating packet data;

packet table storage means for storing, as a packet table, a storage address of packet data corresponding to each pixel block subjected to division

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by said division means;

storage control means for storing packet data of interest, generated by said generation means, in the image memory and storing a storage address of the

5 packet data of interest in the packet table when the packet data of interest is different from preceding packet data, whereas when the packet data of interest is equal to the preceding packet data, not storing the packet data of interest, but storing in the packet

10 table a storage address of the preceding packet data as a storage address of the packet data of interest; and

transfer means for transferring the data, stored by said storage control means, to the system controller through the bus.

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13. A control method of a multi-function apparatus having a scanner controller for controlling a scanner unit which reads a document image, a printer controller for controlling a printer unit which prints an image on

20 a print medium, and a system controller for controlling an entire system, all of which are connected through a bus, said scanner controller comprising:

a division step of dividing the image data, read by the scanner unit, into a pixel block, which is a

25 group of a predetermined number of pixels;

a generation step of compressing the data in the pixel block unit and sequentially generating packet

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data;

     a packet table storage step of storing, as a
packet table, a storage address of packet data
corresponding to each pixel block subjected to division
5   at said division step;

     storage control step of storing packet data of
interest generated at said generation step and a
storage address of the packet data of interest in the
packet table when the packet data of interest is
10 different from preceding packet data, whereas when the
packet data of interest is equal to the preceding
packet data, not storing the packet data of interest,
but storing in the packet table a storage address of
the preceding packet data as a storage address of the
15 packet data of interest; and

     a transfer step of transferring the data, stored
at said storage control step, to the system controller
through the bus.